

Abstract

System for Treating Petroleum and Petrochemical Slop Oil and Sludge Wastes

An initial chemical composition comprising selected surfactants, dispersants,
5 and degreasers that liquefy, disperse, demulsify, degrease, inhibit corrosion and scale
formation, and lower the pour point of a petroleum, coal, Fischer-Tropsch
synthesized, or naturally occurring paraffin-based wax and asphaltene. Such a
product is capable of converting crystalline wax (paraffin) in, for example, slop oil
into an amorphous form of wax at room temperature, allowing the wax to be
10 dissolved in, for example, crude oil without the need for heating, and maintaining it
in solution at room temperature, substantially reducing, indeed in some applications,
preventing, for example, wax build-up in pipelines, processing and transportation
equipment, *etc.*, and the recovery of the hydrocarbons in the slop oil. In a second
aspect of the invention, the pre-blend addition of a hydrotrope—demulsifier, a
15 chelating agent and a wax plasticizer can result in a BS&W of zero for the recovered
hydrocarbon blend.